United States General Accounting Office

GAO

Report to Congressional Committees

November 2001

MILITARY READINESS

Effects of a U.S. Military Presence in Europe on Mobility Requirements

GAO-02-99

Report Documentation Page

Report Date	Report Type	Dates Covered (from... to)
00NOV2001	N/A	-

Title and Subtitle MILITARY READINESS: Effects of a U.S. Military Presence in Europe on Mobility Requirements	**Contract Number**
	Grant Number
	Program Element Number
Author(s)	**Project Number**
	Task Number
	Work Unit Number
Performing Organization Name(s) and Address(es) U.S. General Accounting Office P.O. Box 37050 Washington, D.C. 20013	**Performing Organization Report Number** GAO-02-99
Sponsoring/Monitoring Agency Name(s) and Address(es)	**Sponsor/Monitor's Acronym(s)**
	Sponsor/Monitor's Report Number(s)

Distribution/Availability Statement
Approved for public release, distribution unlimited

Supplementary Notes

Abstract
The United States maintains about 100,000 U.S. military personnel permanently stationed in Europe. According to the Department of Defense, these forces and their supporting infrastructure provide rapid response in the event of a military crisis and help shape the international environment. These forward-deployed forces and equipment also facilitate the movement of U.S. forces, or mobility, to an area of operations.

Subject Terms

Report Classification unclassified	**Classification of this page** unclassified
Classification of Abstract unclassified	**Limitation of Abstract** SAR

Number of Pages
17

GAO
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, DC 20548

November 28, 2001

The Honorable Carl Levin
Chairman
The Honorable John Warner
Ranking Member
Committee on Armed Services
United States Senate

The Honorable Bob Stump
Chairman
The Honorable Ike Skelton
Ranking Minority Member
Committee on Armed Services
House of Representatives

The United States maintains about 100,000 U.S. military personnel permanently stationed in Europe. According to the Department of Defense, these forces and their supporting infrastructure provide rapid response in the event of a military crisis and help shape the international environment. These forward-deployed forces and equipment also facilitate the movement of U.S. forces, or mobility, to an area of operations.

The Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 required us to assess the benefits and costs of the U. S. military engagement in Europe.[1] This letter addresses one aspect of that assessment—the impact of forward-deployed U.S. forces in Europe on mobility requirements in the event of a regional conflict in Europe or the Middle East. A separate GAO report will address other aspects of the mandate.[2] Because of our ongoing work on the Department of Defense's Mobility Requirements Study 2005, we agreed with your offices that, for this report, we would use the study as the basis for a general assessment of how the U.S. military presence in Europe affects defense mobility requirements. Specifically, our objective was to provide available information on how mobility requirements are affected by four elements of

[1]P.L. 106-398, sec. 1223, Oct. 30, 2000.

[2] *European Security: U.S. and European Contributions to Foster Stability and Security in Europe* (GAO-02-174, Nov. 28, 2001).

forward presence: (1) the en-route system of airbases,[3] (2) prepositioned weapons and equipment, (3) Air Force personnel and aircraft,[4] and (4) Army forces.

Because the Mobility Requirements Study 2005 does not specifically analyze the effects of a reduction in the U.S. forward presence in Europe on mobility requirements and because Defense officials stated that they are unaware of any studies or analyses of this specific issue, we relied primarily on information from and views of commanders and other high-ranking officials on the relative importance of these four elements on mobility. We also used prior GAO reports that shed some light on these issues.

Results in Brief

The Department of Defense has not quantified the impact of forward presence in Europe on mobility requirements. However, Defense officials believe that, without forward-deployed forces and equipment in Europe, in some scenarios mobility requirements and mobility costs would be considerably higher and deployment times would be longer, which would increase war-fighting risk. The impact can vary for each of the four elements of forward presence we discuss:

- The U.S. en-route system of airbases is critical to operations in Europe and Southwest Asia. Without these bases, which provide refueling and other logistics support to U.S. airlift aircraft, it would be impossible to meet wartime requirements in Europe and the Middle East/Southwest Asia.
- U.S. prepositioned weapons and equipment in the European theater provides the ability to execute military operations in nearby areas more quickly and at a lower cost than by using air and sealift from the United States.
- Air Force aircraft and personnel deployed in Europe allow forces to move more quickly to small-scale contingencies in the area and reduce the burden on airlift and sealift, if units were coming from the U.S.
- As with the Air Force, Army combat and support units stationed in Europe allow forces to move more quickly and at less cost to small-scale contingencies in the area. The Army can also move these units by land at lower mobility costs than for those units coming from the United States.

[3] A network of overseas airfields that provide logistical support to aircraft on their way to the war zones.

[4] Fighter/attack, refueling, and transport aircraft.

Background

The Department of Defense defines overseas presence as the right mix of permanently stationed forces, rotationally deployed forces, temporarily deployed forces, and infrastructure required to conduct the full range of military operations. Historically, these forces have been concentrated in three regions—Asia-Pacific, Europe, and Southwest Asia. Forces in Europe include the major elements of two Army divisions; six Air Force wings, which include fighter/attack, refueling, and transport aircraft; one Navy aircraft carrier battle group; and one Marine Corps amphibious group.[5] Prepositioned items include Army stockpiles of equipment for three heavy brigades, equipment and supplies for the lead unit of a Marine Corps expeditionary unit, and six Air Force air base support sets.

The Mobility Requirements Study 2005, issued in January 2001, determined the number and mix of mobility systems needed to support the national defense strategy at the time, which required the military to fight and win two nearly simultaneous major wars.[6] This mix includes both airplanes and ships owned by Defense as well as volunteer and chartered civilian airplanes and ships that participate in the Department's mobility programs. The study investigated mobility requirements stateside as well as between theaters and within individual theaters of war. The analysis determined requirements for the three components of mobility (airlift, sealift, and ground transportation) and assumed that most forces and prepositioned equipment currently stationed overseas, including those in Europe, would remain at the levels planned, at the time of the study, for fiscal year 2005. [7] The study also modeled the en-route airbases needed to support the movement of forces and equipment.

The study did not model any scenarios without forward-deployed U.S. troops and equipment in Europe. The study did conclude, however, that the mobility force structure planned for fiscal year 2005 was sufficient to

[5] We do not address Navy forces afloat in this report because they self-deploy and thus have little impact on mobility requirements. Marine forces often deploy with the Navy, but in some instances, these forces would require airlift support.

[6] The Quadrennial Defense Review Report, issued on September 30, 2001, stated that a new defense strategy will require the U.S. military to swiftly defeat aggression in two overlapping major conflicts, be capable of decisively defeating an adversary in one of those conflicts, and conduct small-scale contingency operations elsewhere.

[7] Airlift delivers the majority of the initial forces and supplies and would move these items within the theater. Sealift carries much of the bulk cargo needed to sustain an operation. Ground transportation moves forces and supplies from their home stations to air and seaports and within the theater.

fight and win one major theater war and that a second nearly simultaneous war could be won by shifting air and sealift mobility assets from one theater to the other.

During the time of our study, the Department of Defense was conducting the Quadrennial Defense Review, a congressionally mandated review of national defense strategy, which is to analyze, among other things, force structure and military infrastructure.[8] The review's report, issued on September 30, 2001, stated that the mix of new threats and missions requires the Department to reevaluate the Mobility Requirements Study 2005 in detail and adjust the results as necessary. According to a Department official, this reevaluation includes the en-route basing system, the use of civilian aircraft, and the mobility requirement for the new national defense strategy.

Forward Presence Components Affect Mobility Requirements to Varying Degrees

A U.S. forward presence in Europe reduces mobility requirements, mobility costs, war-fighting risk, and time required for deployment to operations in Europe or Southwest Asia. A reduction in any of the four elements of forward presence in Europe would have an adverse effect on mobility requirements, costs, and risk, according to Defense officials. Central Command officials have told us that the U.S presence in Europe, particularly the en-route system of airbases and the Air Force assets, would be critical to the success of their operations in Southwest Asia.[9] European Command officials also told us that the U.S. presence allows the Commander to manage the missions assigned to the Command more easily, such as the small-scale contingencies in Bosnia and Kosovo.[10] Many officials generally agreed that some elements have a greater relative impact on mobility requirements than others. DOD officials suggested a relative ranking of U.S. military presence in Europe starting with the en-route system of airbases as having the greatest impact on mobility, followed by prepositioned equipment, Air Force aircraft and personnel, and finally Army combat forces.

[8] 10 U.S.C. 118.

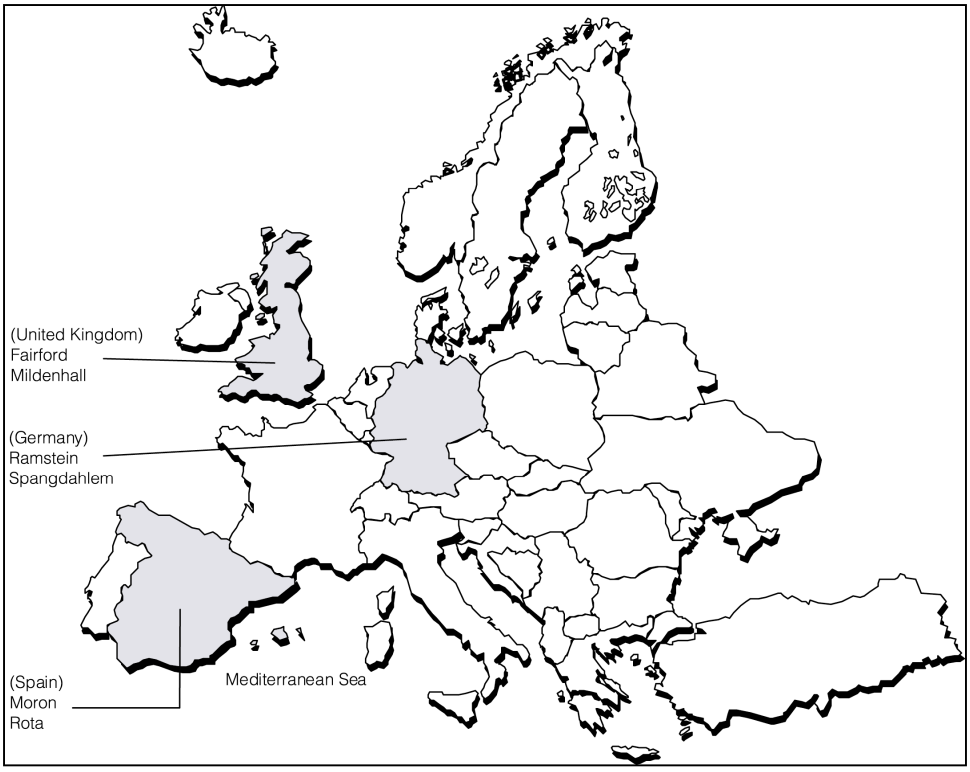
[9] The Central Command oversees the Middle East (excluding Israel, Lebanon, and Syria), parts of Africa and West Asia, and part of the Indian Ocean.

[10] The European Command is responsible for all U.S. military activities in Europe, most of Africa, Israel, Lebanon, Syria, and the South Atlantic Ocean.

En-Route System of Airbases

The Department of Defense maintains a system of en-route airbases in Europe and the Pacific to support long-range airlift operations. These bases provide the basic services, such as parking facilities, maintenance capabilities, equipment to load and unload cargo if needed, and refueling capabilities for airlift aircraft as they move on to their final destinations. Six airbases in Europe are part of this en-route system (see fig. 1).[11]

Figure 1: Location of En-Route Airbases in Europe



Source: Department of Defense.

Officials from the commands agreed that the en-route system is critical to operations in Europe and Southwest Asia. The en-route airbase system in Europe gives transport aircraft the ability to fly from the U.S. to Europe and continue from Europe into Southwest Asia in the early phase of a

[11] Although the United States is currently using facilities at Rhein Main airbase in Frankfurt, Germany, it has agreed to withdraw by December 31, 2005, in exchange for German construction of additional facilities at Spangdahlem and Ramstein.

conflict, a range of about 3,500 nautical miles, which is about the distance a C-17 can fly without refueling. Defense officials believe that the system has a significant impact on their ability to move troops and equipment into any location around the world. For example, the loss of Howard Air Force Base in Panama made it more difficult for the United States to move forces quickly and easily into Central and South America.

According to Defense officials, if the en-route airbase system in Europe did not exist, it would have to be created before combat forces and equipment can arrive from the United States and move through on their way to an operation in Europe or Southwest Asia. This effort would require using airlift to open airbases along the way, instead of using the same airlift to carry troops and equipment. Without the system, the Department would require more air refueling capability, as well as more airlift.

The Mobility Requirements Study 2005 concluded that en-route system capacity is significantly less than requirements but that planned improvements would largely eliminate the shortfall by 2005. Defense transportation officials attribute the shortfall to the shrinkage in U.S. overseas presence and increased reliance on the remaining bases. They believe that the shortfall would cause forces and equipment to arrive in the war theater later than planned, increasing the risk of operations not being executed as planned and the risk of higher casualties. We recently issued a report on the en-route system.[12] This report discussed the system's shortfall in capacity, the reasons for the shortfall and costs associated with improvements, and the lack of basic information and a coherent management structure to ensure that the operations of the system can be carried out efficiently and effectively. We are continuing to study the system's planned modernization.

According to U.S. Transportation Command officials, the en-route system will continue to be evaluated in the context of the new defense strategy. They stated that they anticipate airlift requirements will be at least as demanding, and possibly more demanding in the new strategy.

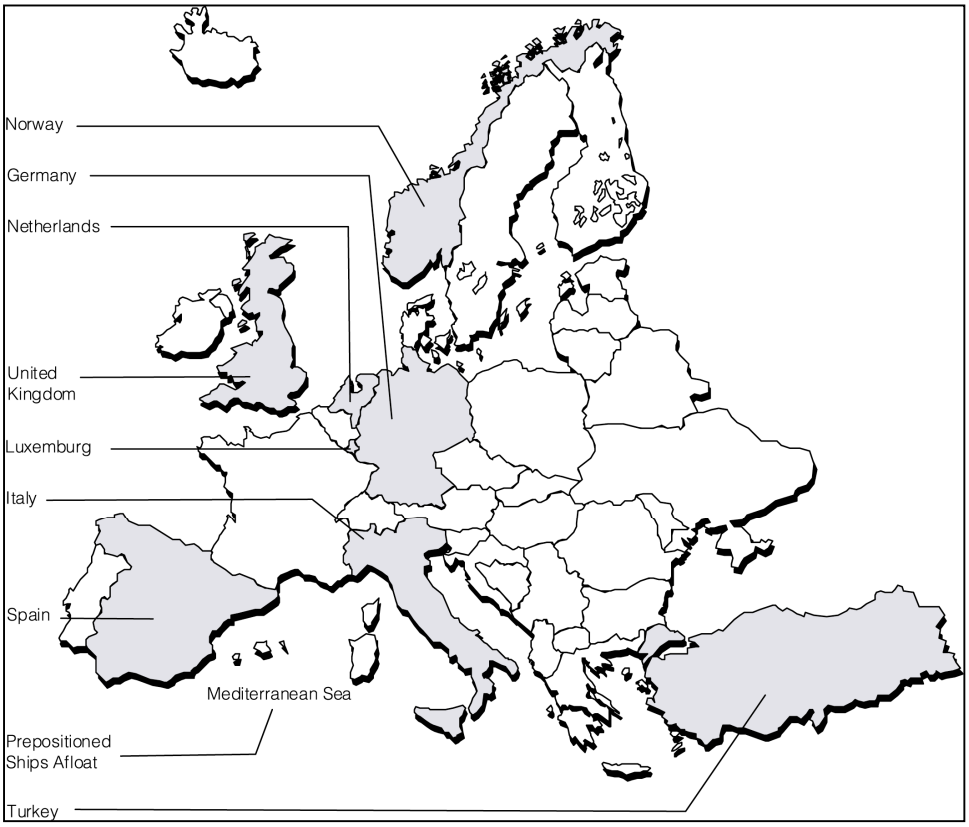
[12] *Military Readiness: Management Focus Needed on Airfields for Overseas Deployments* (GAO-01-566, June 14, 2001).

Prepositioned Weapons and Equipment

The services have both land-based and sea-based equipment and munitions prepositioned in Europe. Land-based prepositioned items consist of equipment and supply sets for three Army brigades, one Army artillery battalion, and one Marine expeditionary unit, in addition to six Air Force air base support sets and other Air Force equipment. The Army's three brigade sets, two in central Europe and one in Italy, include 348 Abrams tanks and 240 Bradley fighting vehicles. In Norway, the Army has equipment for an artillery battalion, which includes 18 self-propelled howitzers, and the Marine Corps stores equipment and 30-day supplies for a Marine expeditionary brigade. Air Force air base support sets—temporary shelters for early-arriving air base personnel—are stored at a site in Luxembourg, with the other equipment stored in sites around Europe. There are also ships afloat in the Mediterranean Sea, which carry equipment and munitions for the Marine Corps and the Air Force (see fig. 2).[13]

[13] The Army plans to shift its prepositioned equipment in Europe to other locations.

Figure 2: Locations of Prepositioned Equipment in Europe



Source: Department of Defense.

Prepositioned equipment in Europe greatly reduces the amount of time needed to deploy to a conflict in Europe than if the same forces and equipment have to be moved from the United States using air and sealift. For example, officials stated that the Army has established a brigade set of equipment in Bosnia for rotating troops to use when they deploy to that mission instead of bringing their own. Using this prepositioned equipment saves about $5.5 million in transportation costs if the unit is coming from the United States and about $2.5 million if the unit is based in Europe. Furthermore, an earlier mobility study pointed out that prepositioned equipment is a more attractive option because it might be less expensive than purchasing more airlift aircraft.[14]

[14] 1995 Mobility Requirements Study Bottom-Up Review, Department of Defense.

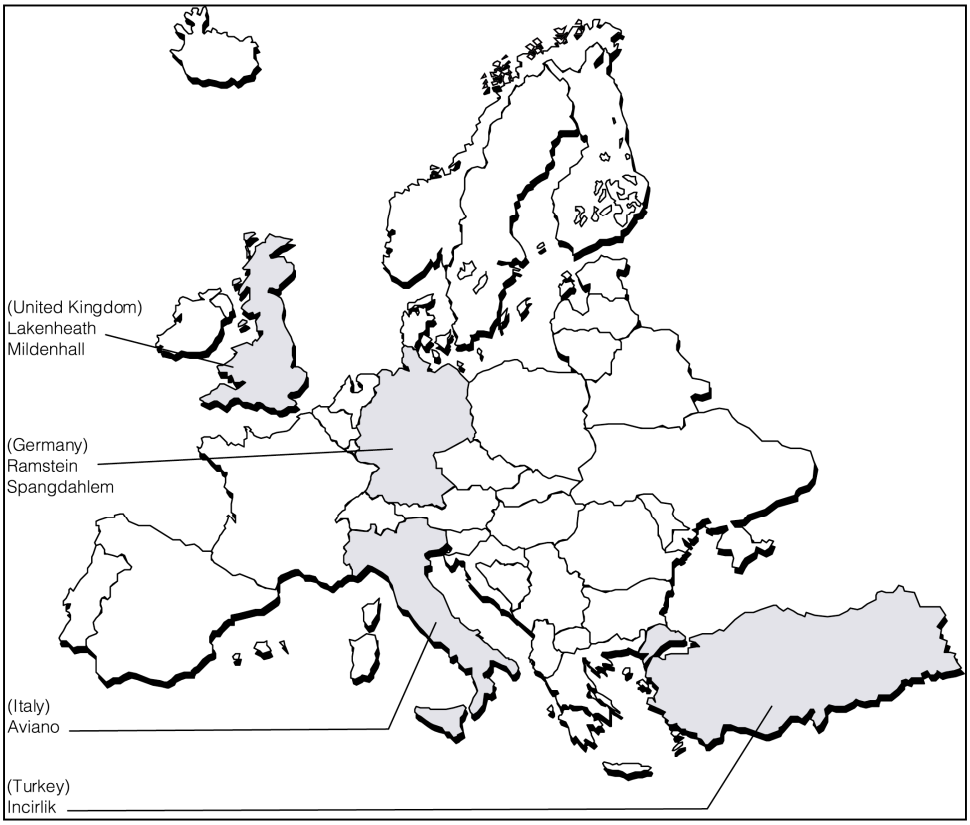
The Mobility Requirements Study 2005 assumed both afloat and land-based prepositioned equipment would be in place and fully stocked in 2005 and did not model any scenarios without it. Land-based prepositioned equipment in Europe is not used to support the two major theater war strategy. However, some prepositioned equipment can be used as reserve during a major conflict or in small-scale contingencies. In fact, from the start of the mission in Bosnia in December 1995 to June 1998, the Army lent over 7,900 pieces of prepositioned equipment to units in Bosnia. The equipment included, among others, Abrams tanks, Bradley fighting vehicles, and armored personnel carriers.

Officials did cite some drawbacks to having large quantities of equipment and weapons prepositioned in specific places. First, it is always difficult to plan conflicts in advance, and there is always the danger that the equipment may be in the wrong place or that two conflicts break out at the same time. Other risks are that prepositioned equipment can be a tempting target for enemies and that the Department might need more flexibility to quickly move to other geographical regions than prepositioning allows.

Air Force Aircraft and Personnel

The Air Force has almost 33,000 personnel in Europe assigned to six wings, which include three fighter wings, a refueling wing, an airlift wing, and a multi-mission wing (see fig. 3). These forces can accomplish all the traditional Air Force missions, both conventional and nuclear. The units include 167 fighter/attack aircraft, 36 transport aircraft, and 15 refueling aircraft.

Figure 3: Major Locations of U.S. Air Forces in Europe



Source: Department of Defense.

Air Force aircraft deployed in Europe allow forces to move more quickly to small-scale contingencies and reduce the burden on airlift and sealift. For example, F-15 pilots from Aviano Airbase in Italy conducted combat missions during the first day of the air campaign in Kosovo. Also, the 31st Fighter Wing based at Aviano is providing the aircraft to support the mission to monitor, control, and police air space over Bosnia. Central Command officials stated that combat and transport aircraft are important to have in Europe and are critical to ensuring the command's ability to execute its operational plan for a major theater war in Southwest Asia.

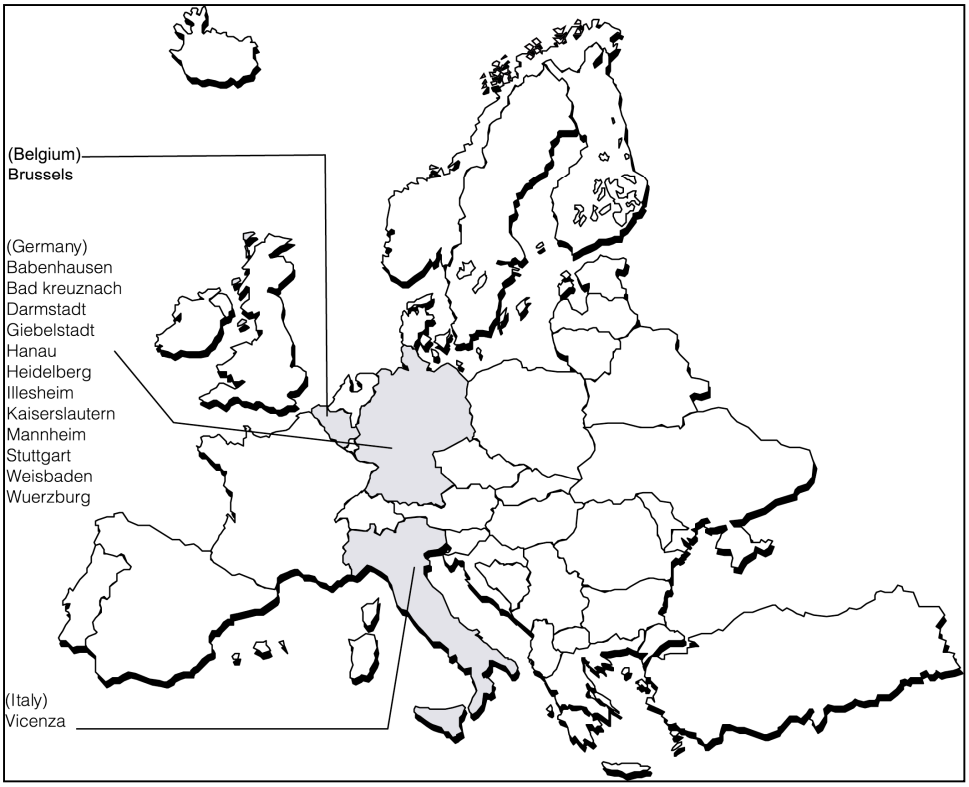
As stated above, the Mobility Requirements Study 2005 modeled the forward-deployed forces in Europe as they were planned for fiscal year 2005. The exception is the assumption that those forces currently enforcing the "no-fly" zones in Northern and Southern Iraq would no longer be assigned to those missions and therefore would no longer be

forward deployed in Europe. This would mean that there would be fewer Air Force personnel and equipment stationed in Europe and a greater mobility requirement for U.S. Central Command to execute their operational plan if a conflict were to arise in Southwest Asia.

Army Forces

There are about 69,400 soldiers based in Europe who are assigned to three infantry and three armored brigades, an aviation brigade, and numerous support units (see fig. 4).

Figure 4: Major Locations of Active Army Units in Europe



Source: Department of Defense.

Some officials we spoke with stated that, of the four elements of forward presence, Army combat and support troops would be the easiest to move, if they were not forward deployed in Europe. In the event of a conflict in Europe or Southwest Asia, 95 percent of ground troops would move by commercial airlift. These troops would then fall in on prepositioned equipment or meet up with their unit equipment, which would move by

sealift. According to the Mobility Requirements Study 2005, there is sufficient sealift, except for special purpose sealift, which is used to move watercraft that cannot self-deploy, to handle the requirements of a two major theater war strategy. This would leave the Defense-owned transport aircraft to carry other critical items.

But having Army personnel and equipment stationed in Europe allows the Commander, U.S. European Command, to deploy troops faster and easier to a conflict in his theater. For example, forward-deployed troops from Europe were among the first units deployed in both the Bosnia and Kosovo operations because they had to travel a much shorter distance from home station to the theater than troops based in the continental United States. According to a former commander-in-chief of the European Command, the 1st Armored Division's deployment to Bosnia from its bases in Germany reduced the number of days required for full deployment and cost significantly less than deployment would have by a similarly equipped unit based stateside using strategic airlift and sealift. Also, European-based units deploy to Bosnia and Kosovo primarily by rail and road transportation, and are therefore less costly to move than forces requiring air transportation.

War fighting risk is another factor to be considered. If personnel, weapons, and equipment have to be moved to a conflict in Europe or Southwest Asia from the United States, they would take longer or require more airlift capacity than the same units coming from Europe, which would increase risk. For example, the Patriot missile battalion in Europe would need the airlift capacity of 59 C-17 cargo aircraft to move to the area of operations under the Central Command. But the same battalion, coming from the United States, would require twice the airlift capacity to arrive within the same timeframe, according to Defense officials. If that capacity were not available, it would take longer to arrive, which would increase the war fighting risk. Again, the Mobility Requirements Study 2005 modeled the Army forces in Europe as they were planned, at the time of the study, for fiscal year 2005.

Agency Comments

In written comments on a draft of this report, DOD generally concurred with the information in our report. DOD's comments are reprinted in appendix I. DOD also provided technical comments, which we incorporated as appropriate.

Scope and Methodology

To determine the impact of U.S. forward presence in Europe on mobility, we reviewed the Mobility Requirements Study 2005 and other Defense mobility studies. We obtained briefings, reviewed documents, and interviewed officials at the Office of the Secretary of Defense, the Joint Chiefs of Staff, the military services, the Central Command, the European Command, the U.S. Transportation Command, the Special Operations Command, the Joint Forces Command, and the Air Mobility Command. We also obtained information and held discussions with officials at U.S. Army, Europe, and U.S. Air Forces, Europe, headquarters.

We conducted our review from May 2001 through August 2001 in accordance with generally accepted government auditing standards.

We are sending copies of this report to the appropriate congressional committees, the Honorable Donald H. Rumsfeld, Secretary of Defense, and The Honorable Mitchell E. Daniels, Jr., Director, Office of Management and Budget. Copies will also be made available to others upon request.

Please contact me at (757) 552-8100 if you or your staffs have any questions concerning this report. Major contributors to this report are listed in appendix II.

Neal P. Curtin
Director, Defense Capabilities
and Management

Appendix I: Comments From the Department of Defense

PROGRAM ANALYSIS
AND EVALUATION

OFFICE OF THE SECRETARY OF DEFENSE
1800 DEFENSE PENTAGON
WASHINGTON, DC 20301-1800

November 13, 2001

Mr. Neal P. Curtin
Director
Defense Capabilities and Management
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Curtin:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "DEFENSE TRANSPORTATION: Effects of a U.S. Military Presence in Europe on Mobility Requirements," dated September 24, 2001 (GAO code 350047).

The Department of Defense generally concurs with the report. We agree that U.S. military presence in Europe provides a critical underpinning for deployments to Europe, Africa, and Southwest Asia. The enroute system of airfields is vital to the successful employment of airlift aircraft and aerial refueling tankers. Likewise, in many cases, the forward presence of Air Force combat aircraft and Army combat and support units allows for a faster response to contingencies in the region, while reducing the burden on our mobility resources. The Department would not consider altering these key components of our forward presence in Europe without first carefully evaluating the potential impacts on our mobility requirements.

The Department appreciates the opportunity to comment on the draft GAO report. Technical comments were provided separately to the GAO staff.

Sincerely,

Barry D. Watts
Director

Appendix II: GAO Contacts and Staff Acknowledgments

GAO Contacts

William C. Meredith (202) 512-4275
Ann Borseth (202) 512-5222

Acknowledgments

In addition to those named above, Lawrence E. Dixon, Patricia Lentini, Alan Goldberg, and Stefano Petrucci made key contributions to this report.

GAO's Mission

The General Accounting Office, the investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents is through the Internet. GAO's Web site (www.gao.gov) contains abstracts and full-text files of current reports and testimony and an expanding archive of older products. The Web site features a search engine to help you locate documents using key words and phrases. You can print these documents in their entirety, including charts and other graphics.

Each day, GAO issues a list of newly released reports, testimony, and correspondence. GAO posts this list, known as "Today's Reports," on its Web site daily. The list contains links to the full-text document files. To have GAO E-mail this list to you every afternoon, go to our home page and complete the easy-to-use electronic order form found under "To Order GAO Products."

Order by Mail or Phone

The first copy of each printed report is free. Additional copies are $2 each. A check or money order should be made out to the Superintendent of Documents. GAO also accepts VISA and Mastercard. Orders for 100 or more copies mailed to a single address are discounted 25 percent. Orders should be sent to:

U.S. General Accounting Office
P.O. Box 37050
Washington, D.C. 20013

To order by phone:
Voice: (202) 512-6000
TDD: (301) 413-0006
Fax: (202) 258-4066

Visit GAO's Document Distribution Center

GAO Building
Room 1100, 700 4th Street, NW (corner of 4th and G Streets, NW)
Washington, D.C. 20013

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: www.gao.gov/fraudnet/fraudnet.htm,
E-mail: fraudnet@gao.gov, or
1-800-424-5454 (automated answering system).

Public Affairs

Jeff Nelligan, Managing Director, NelliganJ@gao.gov (202) 512-4800
U.S. General Accounting Office, 441 G. Street NW, Room 7149,
Washington, D.C. 20548